

CLEAN AIR ACT SECTION 112(r) INSPECTION REPORT
Dorado Wastewater Treatment Plant

GENERAL INFORMATION

Stationary Source	Dorado Wastewater Treatment Plant
Date of Inspection	January 22, 2009
USEPA Inspector	Ellen Banner, – USEPA, REGION II (Edison, NJ) Carlos R. Villefare, USEPA – Region II, Caribbean Office, Enforcement
Contract Auditor	Neil Mulvey, Sullivan Group (Subcontractor)
Description of Activities	<ul style="list-style-type: none">• Opening meeting with facility representative.• Program audit.• Closing meeting with facility representatives. Program audit consisted of the following activities: <ol style="list-style-type: none">1. Document review.2. Field verification.3. Personnel interviews

STATIONARY SOURCE INFORMATION

EPA Facility ID #	1000 0012 4493
Date of Submission Used for Inspection	Receipt Date: September 3, 2004 (Re-submission) New Submission Received: February 18, 2009
Facility Location	Carr. 693, Km. 5.6 Dorado, PR 00646 Tel. (787) 620-2277
Number of Employees	Facility reported 5 employees.

Description of Surrounding Area	The facility is located in a residential area just outside of Dorado city. A stadium and public park are located immediately to the west of the facility; residences are located to the south; a funeral home is located immediately adjacent to the north; and a stream / open space is located to the east.
Participants	<p>Participants included representatives from:</p> <p>Ellen Banner, USEPA – Region II, Edison, NJ Carlos R. Villefare, USEPA – Region II, Caribbean Office Neil P. Mulvey, USEPA Contractor – Sullivan Group Reginaldo Cruz, Operator – AAA Karla R. Martinez, Especialista Ambiental – AAA Hector L. Quinones, Ing. Lic. Derencial – AAA Region Norte, PRASA Denis A. Vazquez, Supervisor Plants – AAA Region Norte Area T.A.*</p> <p>* Lead representative for Dorado Wastewater Treatment Plant</p>

REGISTRATION INFORMATION

Process ID #	57862 – Sewer Plant
Program Level (as reported in RMP)	Program 3
Process Chemicals	Chlorine @ 8,000-lbs.
NAICS Code	22132 (Sewage Treatment Facilities)

GENERAL COMMENTS

The Dorado Wastewater Treatment Plant is one of many water and wastewater facilities owned by the Puerto Rico Aqueduct and Sewer Authority (PRASA). The plant is located along residential road just outside Dorado, PR.

The facility primarily receives domestic waste and operates as a conventional secondary treatment system with a design capacity of 4.05 MGD (normally at 1.2 MGD) of wastewater. With only five employees on-site, the facility is not staffed 24/7, yet operates 24/7.

The facility handles chlorine in 1-ton cylinders. The chlorination process includes a partially enclosed chlorine cylinder storage and feed room (e.g. chlorine shed) and an enclosed pump room immediately adjacent to the chlorine shed. Two chlorine cylinders are connected at a time, one feeding the other in stand-by. The chlorinator is mounted directly on the 1-ton chlorine cylinder. The facility uses approximately 10 - 60-lbs. of chlorine per day. Facility management reported receiving two cylinders every two months with a maximum of four cylinders on-site at any time. At the time of this inspection there were three 1-ton cylinders on-site.

The process includes two chlorine detectors, one detector in the chlorine shed and one detector located in the pump room. The chlorine detectors provide an audible alarm at 3 ppm. There is no interlock between the chlorine detectors and the ventilation fans.

RMP DOCUMENTATION

The facility's written RMP procedures are contained in an RMP/PSM Manual, dated 12/22/08, which contained written procedures for each of the required program elements.

Following are comments regarding specific RMP program elements.

Management System [40 CFR 68.15] & Registration

The Plant Supervisor is responsible for implementation of the RMP program, with support by PRASA corporate. The RMP/PSM Manual included a written description of the management system.

Process Safety Information (PSI) [40 CFR 68.65]

The RMP/PSM Manual included a written description of available PSI information that included a process description, MSDS, BFD, and P&ID.

PSI information not available for review included:

- Electrical classification

- Ventilation system design

There was no documentation available regarding whether existing equipment complies with recognized and generally accepted good engineering practices.

Process Hazard Analysis (PHA) [40 CFR 68.67]

The most recent PHA available for review consisted of a checklist review completed on 12/18/08. A team, including three operators, completed the checklist. The review identified 14 recommendations for consideration. There was no record of resolution for all of the PHA recommendations.

Standard Operating Procedures (SOPs) [40 CFR 68.69]

The RMP/PSM Manual includes written operating procedures for the chlorine system, including making connections and disconnections of the 1-ton cylinders. Documentation included a record of annual certification.

Training [40 CFR 68.71]

The RMP/PSM Manual includes a description of the facility's operator training program. Records of initial and refresher operator training were available for review.

Mechanical Integrity [40 CFR 68.73]

The RMP/PSM Manual includes a written description of the mechanical integrity program. Documentation includes daily visual inspections of the chlorine process, which is documented. Records also include documentation of a 12/08 calibration check on the chlorine detectors. Reviewed records of daily inspections completed in December 2008 and January 2009. Some daily inspection records did not include the dates of inspection or a supervisor's signature noting a review of the records. There was also no notation of follow-up if a discrepancy was identified.

Management of Change (MOC) [40 CFR 68.75] & Pre-Startup Review (PSR) [40 CFR 68.77]

The RMP/PSM Manual includes written MOC and PSR procedures. Facility management reported that there have been no changes in 2008 requiring a MOC / PSR review. There were no MOC / PSR reviews on file for review.

Compliance Audits [40 CFR 68.79]

There was no record available for review of any RMP compliance audit.

Incident Investigation [40 CFR 68.81]

The RMP/PSM Manual includes a written procedure for conducting incident investigations. Facility management reported that there were no chlorine incidents in 2008. Management did report a chlorine release approximately three years ago that resulted in a response form the local fire department. There were no injuries or damage reported from that release. The release was reportedly from a valve in the chlorine line downstream of the shutoff valve that triggered the chlorine alarm. There was no report on file of this incident or investigation.

Employee Participation [40 CFR 68.83]

The RMP/PSM Manual includes a written employee participation plan. Documentation was available regarding employee participation including participation in the PHA study and through documented employee training.

Hot Work Permit [40 CFR 68.85]

The RMP/PSM Manual includes a written hot work permit procedure. There were no other records related to implementation of hot work available for review. Facility management reported that there was no hot work performed in 2008.

Contractor Safety [40 CFR 68.87]

The RMP/PSM Manual includes a written contractor safety procedure. Facility management reported that there have been no contractors working on the chlorine process in the last three years. There were no other records related to implementation of contractor safety available for review.

Emergency Response [40 CFR 68.90 – 68.95]

The RMP/PSM Manual includes a written emergency response plan. The City of Caguas has a paid Fire Department which would respond to the facility in case of emergency. There were written procedures for public notification and for emergency medical treatment in case of a chlorine release.

FINDINGS

Process Safety Information (PSI) [40 CFR 68.65]

- Applicable PSI information related to the equipment in the process that was not available for review included electrical classification and ventilation system design. **The facility must compile necessary PSI related to the equipment in the process as required by 40 CFR 68.65(d)(1)(iii) and (v).**

- There was no documentation available regarding whether the existing equipment / process complies with recognized and generally accepted good engineering practices. **The facility must document that equipment complies with recognized and generally accepted good engineering practices as required by 40 CFR 68.65(d)(2).**

Process Hazard Analysis (PHA) [40 CFR 68.67]

- The most recent PHA available for review consisted of a checklist review completed on 12/18/08. The review identified 14 recommendations for consideration. There was no record of resolution for all of the PHA recommendations. **The facility must ensure that the PHA recommendations are resolved, as required by 40 CFR 68.67(e).**

Mechanical Integrity [40 CFR 68.73]

- Mechanical integrity includes daily visual inspections of the chlorine process. Some daily inspection records did not include the dates of inspection or a supervisor's signature noting a review of the records. There was also no notation of follow-up if a discrepancy was identified. **The facility must ensure that inspection and test records include the date of inspection and required signatures, as required by 40 CFR 68.73(d)(4) and (e).**

Compliance Audits [40 CFR 68.79]

- There was no record available for review of any RMP compliance audit. **The facility must conduct RMP compliance audits, as required by 40 CFR 68.79.**

RECOMMENDATIONS

- The facility is located directly across the street from a stadium and public park. The facility is only staffed during daytime hours. The chlorine detectors only provide a local alarm (e.g., no off-site monitoring). The facility has no written procedures for responding to chlorine alarms that occur during off-shifts. **The facility should consider developing emergency response procedures in the event of a chlorine detection alarm, particularly during off-shift and consider remote monitoring of the chlorine alarms.**
- While facility management reported no changes to the system requiring a MOC or PSR review, a cylinder mounted chlorinator was observed in use rather than a wall mounted chlorinator. It appeared that this change occurred within the past few years. **The facility should ensure that MOC / PSR reviews are completed for all process changes, as required by 40 CFR 68.75 and 77.**

- The ventilation fan for the exhaust pick-up inside the pump room was not operational at time of this inspection. **The facility should ensure that the pump room exhaust ventilation fan is operational, in the event of a chlorine release inside the pump.**
- Management reported a chlorine release approximately three years ago that resulted in a response from the local fire department. There were no injuries or damage reported from that release. The release was reportedly from a valve in the chlorine line downstream of the shutoff valve that triggered the chlorine alarm. There was no report on file of this incident or investigation. **The facility should consider the potential benefit from investigating a non-catastrophic release, or even a “near miss”, in order to increase plant safety. The criteria used to determine if an incident should be investigated, should be included in the written incident investigation plan.**